

## Recreational Use Attainability Analysis

### Cover Sheet

Water Body Name: Trib. to Willow FK.

Water Body Identification #: 0956

#### Completed UAA Checklist:

- ☒ Pre-Field Preparatory Data Sheet
- ☒ Maps with actual survey sites marked
- ☒ Data Sheet A
- ☒ Data Sheet B – 3 of 3 pages for each site
  - o Number of Sites: 6
- ☒ Data Sheet C (if applicable)
  - o Number of Interviews: 0
- ☒ Photographs
  - o Quantities
    - Upstream 6
    - Downstream 6
    - Other 1

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported in this UAA is true and accurate.

Signed: John Roberts Date: 07-28-06

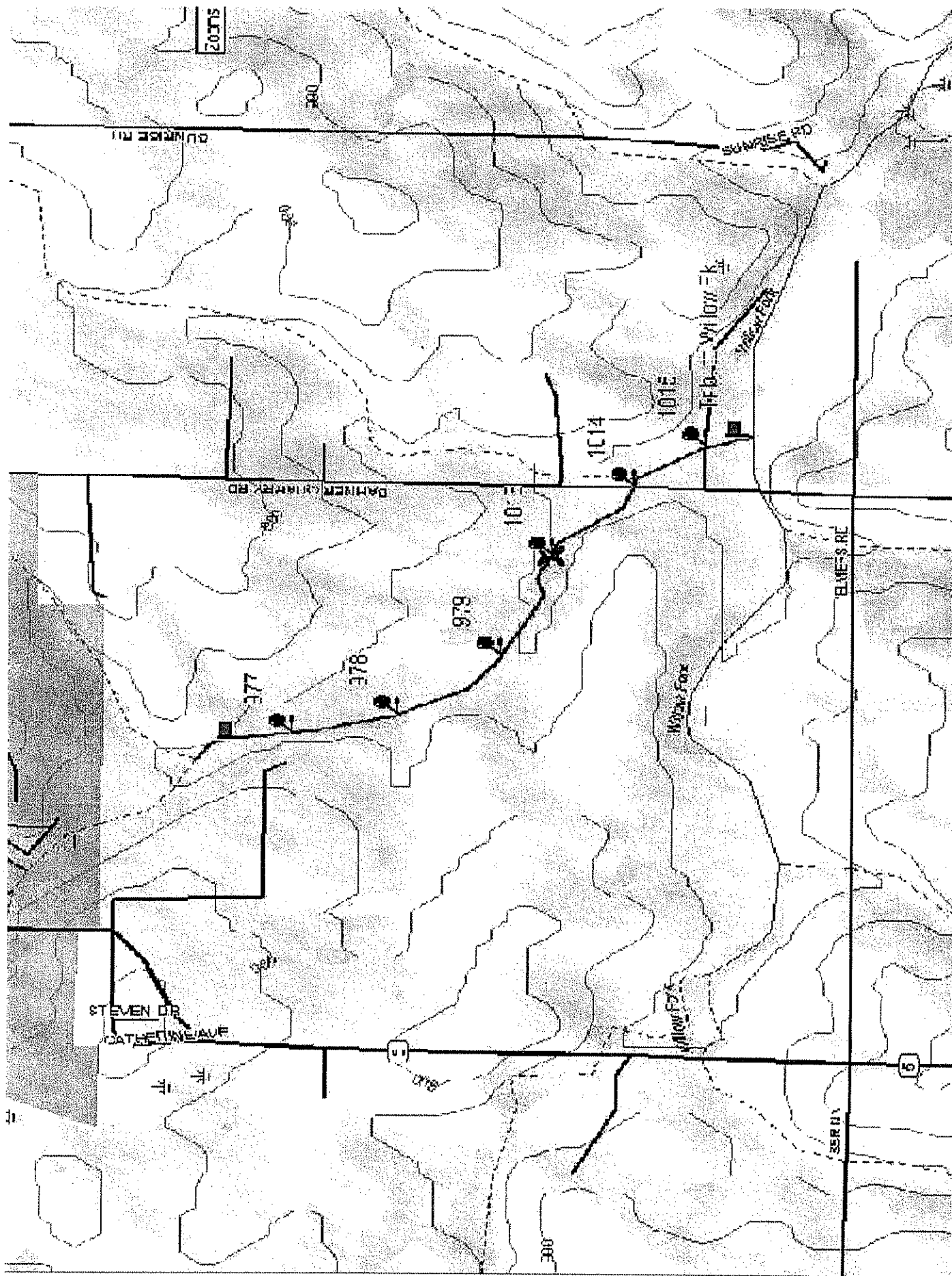
Printed Name: John Roberts Telephone #: 410-356-8993

Organization: Tetra tech, Inc. Position: Scientist

**Pre-Field Preparatory Data Sheet**  
**for Recreational Use Stream Surveys**

Water Body Name: (from USGS 7.5' quad) Trib. to Willow FK.	
8-digit HUC:	Missouri Water Body Identification (WBID) #: 0956
County: Moniteau	
Upstream Legal Description:	
Downstream Legal Description:	
Discharger Facility Name(s): Tipton WWTF	
Discharger Permit Number(s): MO00094188	
Weather Conditions for Past 7 days: Clear Hot	

**Site Locations Map(s):** Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest.



WBID # 0956

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Date: 07/17/2000

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet A - Water Body Identification**

Water Body Name:	Trib to Willow FK	
WBID #:	0956	
Upstream Coordinates: (WGS 84, ddd.ddddd)	977 38.63007, -92.76618	
Downstream Coordinates: (WGS 84, ddd.ddddd)	1015 38.63224, -92.77063	
Current Weather Conditions:	Clear Hot	
Number of Sites Evaluated:	6	
Name(s) of Surveyor(s):	Chad Barbour John Roberts	



WBID # 956 Site # 977

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Date: 07 / 17 / 2006**Field Data Sheets for Recreational Use Stream Surveys****Data Sheet B - Site Characterization - 1 of 3**

(A separate Data Sheet B must be completed for each site)

Latitude (ddd.dddd): <u>38.63087</u>	Arrival Time: <u>1400</u>
Longitude (ddd.dddd): <u>092.76619</u> <u>ACC: 32.2FT</u>	
Photo Ids: Upstream: <u>0701</u> Downstream: <u>0702</u> Other:	
<u>0703 - FENCE</u>	

**Narrative Description of Location:** (Describe access point to stream, nearby roads, landmarks, etc.)AT BAHNBA QUARRY ROAD CROSSING.**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>AGRICULTURE - SEE PHOTO 0702</u> <u>RESIDENTIAL - SEE PHOTO 0701</u>	

**Human Uses Observed\*:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)				

**Evidence of Human Use\*:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>NONE</u>				

**Sources of Pollution:** (e.g., trash dumping, tires, drainages, discharges, etc.)AGRICULTURE - SEE PHOTO 0702

QL: 07-17-06

WBID # 956 Site # 977

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Date: 07 / 17 / 2006

## Data Sheet B - Site Characterization - 2 of 3

## Stream Morphology:

Upstream View Physical Dimensions: 0.25, 0.27, 0.29m

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>8</u>	<u>4.8</u>	<u>8</u>	<u>0.27</u>	<u>0.29</u>
<input checked="" type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Velocity (ft/sec): <u>1m = 8s</u>			

Downstream View Physical Dimensions: 0.44, 0.21, 0.25m

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>12</u>	<u>3.5</u>	<u>12</u>	<u>0.33</u>	<u>0.44</u>
<input checked="" type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Velocity (ft/sec): <u>1m = 6s</u>			

## Substrate\*: (These values should add up to 100%.)

% Cobble	% Gravel	<u>5</u>	% Sand	<u>5</u>	% Silt	% Mud/Clay	<u>90</u>	% Bedrock
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## Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site.)

ALGAL PROVALGNT THROUGHOUT - 90% OF STREAM AFFECTED.

## Water Characteristics\*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

WBID # 956 Site # 977

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Date: 07 / 17 / 2006

### Data Sheet B - Site Characterization – 3 of 3

**Comments:** Please describe any departures from protocol and the reasons for departure (e.g., unanticipated unique local conditions, problems in measuring, site relocation).

NONE

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WBID # 956 Site # 977

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Date: 07 / 17 / 2006

*none*

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet C – Interviews**

(Make additional copies as necessary for multiple interviews)

1. Do you live in the area? ☐ Yes ☐ No

If so, how long have you lived here? \_\_\_\_\_

2. Have you personally used this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often do you use it for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

3. Have you observed others using this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often have you observed it being used for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

4. Additional Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Contact Information** (if willing to provide):

Name:

Address:

Telephone #:

WBID # 956 Site # 978

3

Date: 07 / 17 / 2006**Field Data Sheets for Recreational Use Stream Surveys****Data Sheet B - Site Characterization - 1 of 3**  
(A separate Data Sheet B must be completed for each site)

Latitude (ddd.dddd): <u>33.63077</u>	Arrival Time: <u>420</u>
Longitude (ddd.dddd): <u>092.76672 AG:20.0</u>	
Photo Ids: Upstream: <u>0704</u> Downstream: <u>0705</u> Other:	
<u>0706 - AGRICULTURE</u>	

**Narrative Description of Location:** (Describe access point to stream, nearby roads, landmarks, etc.)130M UPSTREAM OF BANANA QUARRY ROAD CROSSING.**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>AGRICULTURE - SEE PHOTO 0706</u>	

**Human Uses Observed\*:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)				

**Evidence of Human Use\*:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input checked="" type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

**Sources of Pollution:** (e.g., trash dumping, tires, drainages, discharges, etc.)AGRICULTURE - SEE PHOTO 0706QL: 07-17-06  
Joe Fubert

WBID # 956 Site # 978

4

Date: 07 / 17 / 2006

## Data Sheet B - Site Characterization - 2 of 3

## Stream Morphology:

Upstream View Physical Dimensions: 0.80, 0.86, 0.81m

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>120</u>	<u>7.4</u>	<u>5</u>	<u>0.82</u>	<u>0.86</u>
<input checked="" type="checkbox"/> Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Velocity (ft/sec):			

Downstream View Physical Dimensions: 0.45, 0.47, 0.47m

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>120</u>	<u>8.0</u>	<u>10</u>	<u>0.46</u>	<u>0.47</u>
<input type="checkbox"/> Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Velocity (ft/sec):			

## Substrate\*: (These values should add up to 100%.)

% Cobble	<u>70</u>	% Gravel	<u>10</u>	% Sand	<u>10</u>	% Silt	% Mud/Clay	<u>10</u>	% Bedrock
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## Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site.)

MODERATE AMOUNT OF ALGAE - 40 % OF STREAM AFFECTED

## Water Characteristics\*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other: <u>SAND</u>
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

WBID # 956 Site # 978

5

Date: 07 / 17 / 2006

### Data Sheet B - Site Characterization – 3 of 3

**Comments:** Please describe any departures from protocol and the reasons for departure (e.g., unanticipated unique local conditions, problems in measuring, site relocation).

SITE RELOCATED TO AREA OF EASIER ACCESS.

WBID # 956 Site # 978

6

Date: 07 / 17 / 2006

*none*

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet C – Interviews**

(Make additional copies as necessary for multiple interviews)

1. Do you live in the area? ☐ Yes ☐ No

If so, how long have you lived here? \_\_\_\_\_

2. Have you personally used this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often do you use it for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

3. Have you observed others using this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often have you observed it being used for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

4. Additional Comments: \_\_\_\_\_

**Contact Information** (if willing to provide):

Name:

Address:

Telephone #:



WBID # 956 Site # 979

3

Date: 07 / 17 / 2006**Field Data Sheets for Recreational Use Stream Surveys****Data Sheet B - Site Characterization - 1 of 3**

(A separate Data Sheet B must be completed for each site)

Latitude (ddd.dddd): <u>38.63131</u>	Arrival Time: <u>1450</u>
Longitude (ddd.dddd): <u>042.76707</u> Acc: <u>25.2 FT</u>	
Photo Ids: Upstream: <u>0707</u> Downstream: <u>0708</u> Other:	
<u>0709 - PATH PASTURE</u>	

**Narrative Description of Location:** (Describe access point to stream, nearby roads, landmarks, etc.)260M UPSTREAM OF BANNER QUARRY ROAD CROSSING.**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>AGRICULTURE - SEE PHOTO 0709</u>	

**Human Uses Observed\*:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)				

**Evidence of Human Use\*:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input checked="" type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

**Sources of Pollution:** (e.g., trash dumping, tires, drainages, discharges, etc.)AGRICULTURE - SEE PHOTO 0709QL: 07-17-06  
*John R. Raut*

WBID # 956 Site # 979

4

Date: 07 / 17 / 2006

## Data Sheet B - Site Characterization - 2 of 3

## Stream Morphology:

Upstream View Physical Dimensions: 0.28 0.30 0.36m

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>260</u>	<u>7.5</u>	<u>12</u>	<u>0.31</u>	<u>0.36</u>
<input type="checkbox"/> Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Velocity (ft/sec):			

Downstream View Physical Dimensions: 0.24, 0.21, 0.25m

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>260</u>	<u>4.8</u>	<u>11</u>	<u>0.23</u>	<u>0.25</u>
<input type="checkbox"/> Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Velocity (ft/sec): <u>1m = 9s</u>			

## Substrate\*: (These values should add up to 100%.)

<u>10</u> % Cobble	<u>70</u> % Gravel	<u>10</u> % Sand	<u>10</u> % Silt	% Mud/Clay	% Bedrock
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## Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site.)

MODERATE AMOUNT OF ALGAE PRESENT - 50% OF BOTTOM AFFECTED.

## Water Characteristics\*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other: <u>SAND</u>
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

WBID # 956 Site # 979

5

Date: 07 / 17 / 2006

### Data Sheet B - Site Characterization – 3 of 3

**Comments:** Please describe any departures from protocol and the reasons for departure (e.g., unanticipated unique local conditions, problems in measuring, site relocation).

SITE RELOCATED TO AREA OF EASTERN ACCESS

WBID # 956 Site # 979

6

Date: 07 / 17 / 2006

*none*

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet C – Interviews**

(Make additional copies as necessary for multiple interviews)

1. Do you live in the area? ☐ Yes ☐ No

If so, how long have you lived here? \_\_\_\_\_

2. Have you personally used this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often do you use it for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

3. Have you observed others using this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often have you observed it being used for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

4. Additional Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Contact Information** (if willing to provide):

Name:

Address:

Telephone #:

WBID # 956 Site # 1013

3

Date: 07/17/2006**Field Data Sheets for Recreational Use Stream Surveys****Data Sheet B - Site Characterization - 1 of 3**

(A separate Data Sheet B must be completed for each site)

Latitude (ddd.dddd): <u>38.63198</u>	Arrival Time: <u>1510</u>
Longitude (ddd.dddd): <u>092.76778</u> <u>ALC: 21.2 FT.</u>	
Photo Ids: Upstream: <u>0710</u> Downstream: <u>0711</u> Other: <u>0712-WWTP, FENCE 0713-PASTURE</u>	

**Narrative Description of Location:** (Describe access point to stream, nearby roads, landmarks, etc.)400M UPSTREAM OF BARNUM QUARRY ROAD CROSSING.**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>AGRICULTURE - PHOTO 0713</u> <u>WWTP - PHOTO 0712</u>	

**Human Uses Observed\*:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

**Evidence of Human Use\*:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input checked="" type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input checked="" type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

**Sources of Pollution:** (e.g., trash dumping, tires, drainages, discharges, etc.)WWTP, AGRICULTURE - (PHOTO) 0712, 0713.QC: 07-17-06  
*John R. [Signature]*

WBID # 456 Site # 1013

4

Date: 07 / 17 / 2006

## Data Sheet B - Site Characterization - 2 of 3

## Stream Morphology:

Upstream View Physical Dimensions: 0.37, 0.40, 0.39 m

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>400</u>	<u>7.2</u>	<u>10</u>	<u>0.39</u>	<u>0.40</u>
<input type="checkbox"/> Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Velocity (ft/sec):			

Downstream View Physical Dimensions: 0.84, 0.91, 0.81 m

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>400</u>	<u>3.0</u>	<u>15</u>	<u>0.85</u>	<u>0.91</u>
<input type="checkbox"/> Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Velocity (ft/sec):			

## Substrate\*: (These values should add up to 100%.)

<u>5</u> % Cobble	<u>70</u> % Gravel	% Sand	<u>15</u> % Silt	<u>10</u> % Mud/Clay	% Bedrock
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## Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site.)

<u>MODERATE AMOUNT OF ALGAE PRESENT - 40% OF STREAM AFFECTED</u>
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## Water Characteristics\*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

WBID # 956 Site # 1013

5.

Date: 07 / 17 / 2006

### Data Sheet B - Site Characterization – 3 of 3

**Comments:** Please describe any departures from protocol and the reasons for departure (e.g., unanticipated unique local conditions, problems in measuring, site relocation).

SITE RELOCATED TO AREA WITH EASIER ACCESS.

WBID # 956 Site # 1013

6

Date: 07 / 17 / 2006

*None*

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet C – Interviews**

(Make additional copies as necessary for multiple interviews)

1. Do you live in the area? ☐ Yes ☐ No

If so, how long have you lived here? \_\_\_\_\_

2. Have you personally used this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often do you use it for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

3. Have you observed others using this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often have you observed it being used for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

4. Additional Comments: \_\_\_\_\_

**Contact Information** (if willing to provide):

Name:

Address:

Telephone #:



WBID # 456 Site # 1014

3

Date: 07/17/2006**Field Data Sheets for Recreational Use Stream Surveys****Data Sheet B - Site Characterization – 1 of 3**  
(A separate Data Sheet B must be completed for each site)

Latitude (ddd.dddd): <u>38.65204</u>	Arrival Time: <u>1525</u>
Longitude (ddd.dddd): <u>092.76397</u> <u>Alt: 232 FT.</u>	
Photo Ids: Upstream: <u>0714</u> Downstream: <u>0715</u> Other: <u>0716-WWTP</u>	

**Narrative Description of Location:** (Describe access point to stream, nearby roads, landmarks, etc.)530 M UPSTREAM OF BANNER QUARRY ROAD CROSSING.**Surrounding Conditions\*:** (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>WWTP - PHOTO 0716</u>	

**Human Uses Observed\*:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

**Evidence of Human Use\*:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV / ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input checked="" type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other: <u>SEE PHOTO 0716</u>				

**Sources of Pollution:** (e.g., trash dumping, tires, drainages, discharges, etc.)WWTP - SEE PHOTO 0716

QC: 07-17-06  
*John Schubert*

WBID # 956 Site # 1014

4

Date: 07 / 17 / 2006

## Data Sheet B - Site Characterization - 2 of 3

## Stream Morphology:

Upstream View Physical Dimensions: 0.43, 0.44, 0.36

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>530</u>	<u>9.0</u>	<u>18</u>	<u>0.41</u>	<u>0.44</u>
<input type="checkbox"/> Flow Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Velocity (ft/sec):					

Downstream View Physical Dimensions: 0.52, 0.52, 0.57

	Distance from access point (m)	Width (m)	Length (m)	Avg. Depth (m)	Max Depth (m)
<input type="checkbox"/> Riffle					
<input type="checkbox"/> Run					
<input checked="" type="checkbox"/> Pool	<u>530</u>	<u>6.0</u>	<u>5</u>	<u>0.54</u>	<u>0.57</u>
<input type="checkbox"/> Flow Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Velocity (ft/sec):					

## Substrate\*: (These values should add up to 100%.)

% Cobble	<u>50</u>	% Gravel	<u>20</u>	% Sand	<u>10</u>	% Silt	<u>10</u>	% Mud/Clay	<u>10</u>	% Bedrock
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(0.52 - 0.57)

## Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site.)

MODERATE AMOUNT OF ALGAE - 30% OF STREAM AFFECTED.

## Water Characteristics\*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

\*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

WBID # 956 Site # 1014

5

Date: 07 / 17 / 2006

### Data Sheet B - Site Characterization – 3 of 3

**Comments:** Please describe any departures from protocol and the reasons for departure (e.g., unanticipated unique local conditions, problems in measuring, site relocation).

SITE RELOCATED TO AREA WITH EASIER ACCESS.

WBID # 956 Site # 1014

6

Date: 07 / 17 / 2006

*NONE*

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet C – Interviews**

(Make additional copies as necessary for multiple interviews)

1. Do you live in the area? ☐ Yes ☐ No

If so, how long have you lived here? \_\_\_\_\_

2. Have you personally used this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often do you use it for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

3. Have you observed others using this water body for recreation since 1975? ☐ Yes ☐ No

If so, please check ALL that apply:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input type="checkbox"/> None of the above	<input type="checkbox"/> Other:

How often have you observed it being used for recreation?

G More than 5 times per year

G 1 – 5 times per year

G Less than 1 time per year – please describe: \_\_\_\_\_

4. Additional Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Contact Information** (if willing to provide):

Name:

Address:

Telephone #:



**WBID# 0956**



**Site# 977 Photo ID# 0701, Upstream**



**Site# 977 Photo ID# 0702, Downstream**



**Site# 977 Photo ID# 0703, Fence**



**Site# 978 Photo ID# 0704, Upstream**



**WBID# 0956**



**Site# 978 Photo ID# 0705, Downstream**



**Site# 978 Photo ID# 0706, Agriculture**



**Site# 979 Photo ID# 0707, Upstream**



**Site# 979 Photo ID# 0708, Downstream**



**WBID# 0956**



**Site# 979 Photo ID# 0709, Path**



**Site# 1013 Photo ID# 0710, Upstream**



**Site# 1013 Photo ID# 0711, Downstream**



**Site# 1013 Photo ID# 0712, Fence**



**WBID# 0956**



**Site# 1013 Photo ID# 0713, Pasture**



**Site# 1014 Photo ID# 0715, Upstream**



**Site# 1014 Photo ID# 0716, WWTP**